Problems of the elderly care

dr n. med. Jolanta Kowalik

Akademia Wychowania Fizycznego Józefa Piłsudskiego w Warszawie
Józef Piłsudski University of Physical Education in Warsaw

Category of the aging population

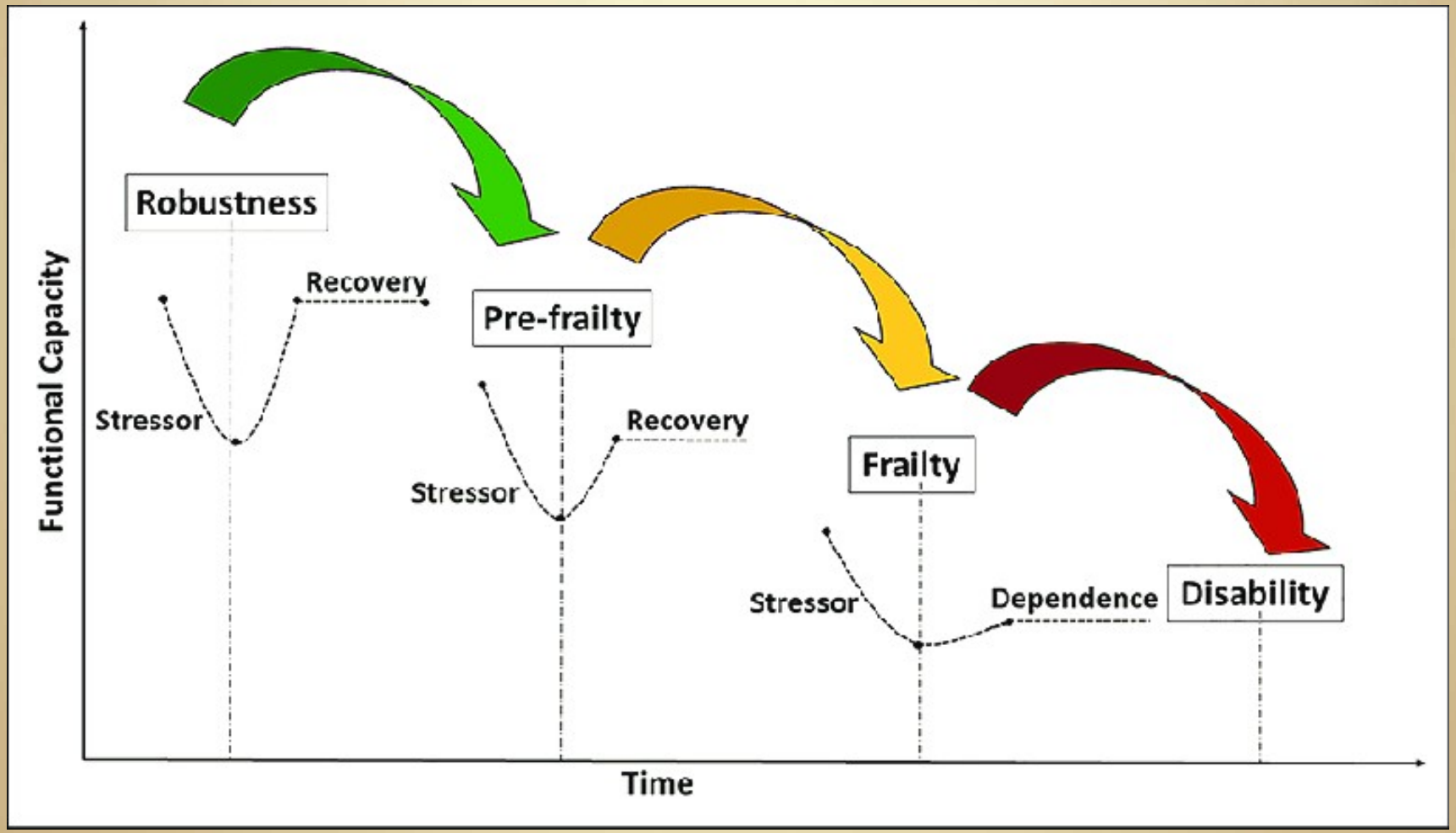
Age /years/	Category
55-64	Older
65-74	Elderly
75-84	Aged
85 and older	Extremly aged
Or	
60-74	**Young-old**
75-84	**Middle-old**
85 and older	**Old-old**

Extremly aged in EU

- Perhaps the most remarkable aspect of the projected changes to the EU's population structure concerns **the progressive ageing of the older population itself:**
  - the relative importance **of the very old (people aged 85 years or more) is growing at a faster pace than any other age group.**
- ***Between 2019 and 2050, the number of very old people in the EU-27 is projected to more than double, up 113.9 %.***
- To give some idea of the magnitude of this change, the number of people ***aged 85 years or more is projected to increase from 12.5 million in 2019 to 26.8 million by 2050,***
  - while the number of ***centenarians (people aged 100 years or more***) is projected to grow **from 96 600 in 2019** to close **to half a million (484 000) by 2050.**

AGING EUROPE, 2020 EDITION BY EUROSTAT

The cascade of functional decline in older adults from independence, through pre-frailty to frailty and disability (in the absence of intervention)



The elderly care – living alone

- Due to the fact that society is increasingly older there is **a big number of elderly people who live alone** (especially in big cities).
- Loneliness is becoming an increasing **social problem**.
- Older adults living alone **usually** **have increased risk** with respect to:
  - falls,
  - dehydration,
  - hypothermia,
  - infections,
  - and physical injuries
- Moreover, it is not uncommon for elderly people living alone to **be found helpless or dead in their homes.**

Immobility

- Persons who are **chronically ill, aged**, or **disabled** are **particularly susceptible to** the adverse effects of
  - **prolonged bed rest,**
  - **immobilization,**
  - **and inactivity**.
- It may later cause a **wide range of complications.**
- **A mobile person** generally turns approximately **once every 10-12 minutes while sleeping.**
- **This action provides for**
  - healthy blood circulation,
  - stimulation of body organs
  - and movement of body fluids.
- **when the patients**
  - stay in one position for too long,
  - use a wheelchair
  - or are confined to a bed, even for a short period of time (for example, after surgery or an injury)
- constant pressure is placed against the skin,
- If that pressure is not regularly relieved, and the blood supply restored, **the affected tissue dies and sloughs off and a pressure ulcer (i.e. bedsore)** begins to form.
- These occur most **commonly on the buttocks, hips and heels** and can **be life-threatening if they become infected**.

What are the common causes and risk factors of immobility in older adults?

- **Muscles, joints, and skeleton problems** – Arthritis, Osteoporosis, Fractures (especially hip and femur), Podiatric problems
- **Neurological problems** – Stroke, Parkinson's disease, Cerebellar dysfunction, Neuropathies
- **Heart, lung, and circulation problems -** Chronic coronary heart disease, Chronic obstructive lung disease, Severe heart failure
- **Cognitive, psychological and sensory problems** – Dementia, Depression, Fear and anxiety (e.g. fear from instability and falling), Pain
- **Impaired vision**
- **Others -** General weakness after prolonged bed rest, Malnutrition, Drug side effects, Severe illness of any type

What are the complications of immobility?

Physical

- **Muscle wasting**,
- Muscle pain,
- Osteoporosis,
- Pressure sores,
- Hypothermia,
- Aspiration pneumonia,
- Constipation,
- Incontinence,
- Deep vein thrombosis,

Psychological and Social

- Isolation,
- loss of independence,
- depression,
- dementia

FALLS !!!

Geriatrics giants

- The so-called **„Geriatrics giants”** are:
  - Immobility,
  - Incontinence,
  - Dementia,
  - Instability and falls
- **Health issues** in older adults may also include:
  - use of multiple medications – polipharmacy (more than 4-5 prescribed drugs)
  - impaired vision and hearing,

Falls in the elderly

- **Important public health problems** in an aging society:
  - **Falls,**
  - **fall-related injury**
  - and **fear of falling – post fall syndrom**
- **Falls** and **concomitant instability** can be markers of poor health and declining function.

FALLS

- ***A fall is defined as an unexpected, involuntary loss of balance by which a person comes to rest at a lower or ground level***
- The older population is growing in number
- falling is common in this group
- **Up to 1/3** of people over the age of 65 fall each year
  - **with half** reporting multiple falling episodes

Fall-related injury

- is the **sixth highest cause of death in older people**,
- **Half of those aged over 75** years who fracture their hip as a result of a fall die within one year,
- Falls are also a leading cause of **head injury**, the most serious being subdural haematoma,
- Falls are **associated with**
  - **major morbidity**,
  - functional decline
  - and increased healthcare expenditure

Fall-related injury

- In a hospital setting, **10% of older patients** who have fallen die before discharge,
- In the United Kingdom about **310,000 fractures** occur each year in older people,
- **14 000 people/year** die each year as a result of an osteoporotic hip fracture,
  - with up to **33% of hip fracture patients dying** within one year of fracture

Complications

- It is posited that the effects of falls extend beyond obvious **physical and direct cost**.
- ***Even if falls do not cause physical injury, the psychological effect can be long-lasting.***
- **“Post-fall syndrome” results in**
  - Hesitancy,
  - Fear of falling,
  - and a loss of confidence leading to loss of mobility and independence

Etiology of falls

- **The best predictor of falling is a previous fall (!!!!)**
- However**, falls in older people rarely have a single cause or risk factor.**
- A fall is usually caused by a complex interactions among the following:
  - **Intrinsic factors** (age-related decline in function, disorders, and adverse drug effects)
  - **Extrinsic factors** (environmental hazards)
  - **Situational factors** (related to the activity being done, eg, rushing to the bathroom)

Common causes of falls in the elderly

- Accident,
- Environmental hazards,
- Fall from bed,
- Gait disturbance,
- Pain related to arthritis,
- Medications or alcohol,
- Acute illness,
- Confusion and cognitive impairment,
- Postural hypotension,
- Visual disorder,
- Central nervous system disorders,
- Epilepsy

Risk factors for falls

- **Demographic** factors,
- **Historical** factors,
- **Physical** deficits,
- Others,

DEMOGRAPHIC FACTORS

- Older age (especially **>=75 years**),
- Living alone,
- Women,

HISTORICAL FACTORS

- Use of cane or walker,
- Previous falls
- Acute illness,
- **Chronic condition**, especially neuromuscular disorders,
- **Medications**, especially the use of 4 or more prescription drugs,

PHYSICAL DEFICITS

- Cognitive impairment,
- Reduced vision,
  - including age-related changes
    - (i.e., decline in visual acuity, decline in accommodative night vision, decline in peripheral vision)
- Difficulty rising from a chair,
- Foot problems /corns, deformities/
- **Neurologic changes**, including

age related changes

  - (i.e., postural instability,
  - slower reaction time,
  - diminished sensory awareness for light touch, vibration and temperature),
- **Decreased hearing**,

Environmental hazards

- **All living spaces:**
  - Thrown rugs,
  - Carpet edges,
  - Low furniture and objects on the floor,
  - Clutter,
  - Cords and wires on the floor,
  - Illumination at night (inadequate),
  - Carpet or treads on stairs,
  - No handrails on staircases,
  - Chairs that are to low to sit in and get up easily,
  - Floor wax,
  - Telephone on the floor,

Environmental hazards

- **Bathroom:**
  - **No bars** in the bathtub or shower and by the toilet,
  - **no rubber mats** in the bathtub or shower,
  - **No raised toiled seat**,
- **Outdoors:**
  - Cracked **sidewalks**,
  - **No handrails** on stairs and steps,
  - **Inadequate lighting** by doorways and along walkways leading to doors

Home Assessment Checklist for Hazards That Increase Risk of Falling

Location	Hazard	Correction	Rationale
General household			
Lighting	Too dim	Provide ample lighting in all areas	Improves visual acuity and contrast sensitivity
Chairs, tables, other furnishings	Unstable	Reduce glare with evenly distributed Provide furniture stable enough to support the weight of a person leaning on table edges or chair arms and backs Do not use chairs that have wheels or that swivel Repair legs that are loose	Increases support for people with impaired balance and helps with transferring
	Chairs without armrests	Provide chairs with armrests that extend forward enough to provide leverage when getting up or sitting down	Helps people with proximal muscle weakness and helps with transferring
	Obstructed pathways	Arrange furnishings so that pathways are not obstructed Remove clutter from hallways	Reduces risk of tripping over or bumping into obstacles, making movement in the home easier and safer, especially for people with impaired peripheral vision
Wires and cords	Exposed in pathways	Tack cords above the floor or run beneath floor coverings	Reduces risk of tripping

Kitchen			
Cabinets, shelves	Too high	Keep frequently used items at waist level Install shelves and cupboards at an accessible height	Reduces risk of falls due to frequent reaching or climbing on ladders or chairs
Floors	Wet or waxed	Place a rubber mat on the floor in the sink area Wear rubber-soled shoes in the kitchen Use nonslip wax	Reduces risk of slipping, especially for people with a gait disorder

Bathroom			
Bathtub or shower	Slippery tub or shower floor	Install skid-resistant strips or rubber mat Use shower shoes or a bath seat (a bath seat enables people with impaired balance to sit while showering)	Reduces risk of sliding on a wet tub or shower floor
	Need to use the side of the bathtub for support or transfer	Install grab bars in shower Install a portable grab bar on the side of the tub Take grab bar on trips	Helps with transferring
Towel racks, sink tops	Unstable for use as support while transferring from the toilet, tub, or shower	Fasten grab rails to wall studs	Helps with transferring
Toilet seat	Too low	Use elevated toilet seat	Helps with transferring to and from the toilet
Doors	Locks	Remove locks from bathroom doors or use locks that can be opened from both sides of the door	Enables other people to enter if a person falls

Stairways			
Height	Height of steps too high	Correct step height to < 15 cm	Reduces risk of tripping, especially for people who have difficulty stepping
Handrails	Missing	Install and anchor rails well on both sides of the stairway Use cylindrical rails placed 2.5–5 cm from the wall	Provides support and enables people to grasp the rail with either hand
	Too short and end of rail unclear	Extend beyond the top and bottom step and turn ends inward	Signals that the top or bottom step has been reached
Configuration	Too steep or too long	Install landings on stairways when feasible or select a residence with a stairway landing	Provides a rest stop, especially for people with heart or pulmonary disorders
Condition	Slippery	Place nonskid treads securely on all steps	Prevents slipping
Lighting	Inadequate	Install adequate lighting at both the top and bottom of stairway Provide night-lights or bright-colored adhesive strips to clearly mark steps	Outlines location of steps, especially for people with impaired vision or perception

Drugs that may increase the risk of falling

- Sedative-hypnotic and anxiolytic drugs,
- Tricyclic **antidepressants**,
- Major **tranquilizers**,
- **Antihypertensive** drugs,
- **Cardiac** medications,
- **Corticosteroids**,
- Nonsteroidal anti-inflammatory drugs,
- **Hypoglycemic** agents,
- Any medications that is likely to affect balance,

Extrinsic factors

- **Environmental factors** can increase the risk of falls independently or, more importantly, **by interacting with intrinsic factors.**
- Risk is highest when the environment requires greater postural control and mobility (eg, when walking on a slippery surface) and when the environment is unfamiliar (eg, ***when relocated to a new home).***

I HATE FALLING

- **This mnemonic** can be used to remind of physical findings in patients who fall or nearly fall,
  - most falls have multiple causes

I HATE FALLING

- **I**nflammation of joints (or joint deformity),

- **H**ypertension (orthostatic blood pressure changes),
- **A**uditory and visual abnormalities
- **T**remor (Parkinson's disease or other causes of tremor),
- **E**quilibrium (balance) problem,

- **F**oot problems,
- **A**rrhythmia, heart block or valvular disease,
- **L**eg-length discrepancy,
- **L**ack of conditioning (generalized weakness),
- **I**llness,
- **N**utrition (poor, weight loss),
- **G**ait disturbance,

Prevention of falls

- Eliminate environmental hazards.
- Improve home supports.
- Modify medications.
- Provide balance training.
- Provide opportunities for socialization and encouragement.

Tinetti Assessment Tool: Balance

Patient's Name: _____ **Date:** _____

Location: _____ **Rater:** _____

Initial Instructions: Subject is seated in a hard, armless chair. The following maneuvers are tested.

Task	Description of Balance	Possible	Score
1. Sitting Balance	Leans or slides in chair Steady, safe	= 0 = 1	
2. Arises	Unable without help Able, uses arms to help Able without using arms	= 0 = 1 = 2	
3. Attempts to arise	Unable without help Able, requires > 1 attempt Able to rise, 1 attempt	= 0 = 1 = 2	
4. Immediate standing balance (first 5 seconds)	Unsteady (swaggers, moves feet, trunk sway) Steady but uses walker or other support Steady without walker or other support	= 0 = 1 = 2	
5. Standing Balance	Unsteady Steady but wide stance (medial heels > 4 inches apart) and uses cane or other support Narrow stance without support	= 0 = 1 = 2	

6. Nudged (subject at max position with feet as close together as possible, examiner pushes lightly on subject's sternum with palm of hand 3 times.	Begins to fall Staggers, grabs, catches self Steady	= 0 = 1 = 2	
7. Eyes closed (at maximum position #6)	Unsteady Steady	= 0 = 1	
8. Turning 360 degrees	Discontinuous steps Continuous steps Unsteady (grabs, swaggers) Steady	= 0 = 1 = 0 = 1	
9. Sitting Down	Unsafe (misjudged distance, falls into chair) Uses arms or not a smooth motion Safe, smooth motion	= 0 = 1 = 2	
		Balance Score:	

Tinetti Assessment Tool: Gait

Patient's Name: _____ **Date:** _____

Location: _____ **Rater:** _____

Initial Instructions: Subject stands with examiner, walks down hallway or across the room, first at "usual" pace, then back at "rapid, but safe" pace (using usual walking aids).

Task	Description of Gait	Possible	Score
10. Initiation of gait (immediately after told to "go")	Any hesitancy or multiple attempts to start No hesitancy	= 0 = 1	
11. Step length and height	a. Right swing foot does not pass left stance foot with step	= 0	
	b. Right foot passes left stance foot	= 1	
	c. Right foot does not clear floor completely with step	= 0	
	d. Right foot completely clears floor	= 1	
	e. Left swing foot does not pass right stance foot with step	= 0	
	f. Left foot passes right stance foot	= 1	
	g. Left foot does not clear floor completely with step	= 0	
	h. Left foot completely clears floor	= 1	

12. Step Symmetry	Right and left step length not equal (estimate) Right and left step appear equal	= 0 = 1	
13. Step Continuity	Stopping or discontinuity between steps Steps appear continuous	= 0 = 1	
14. Path (estimated in relation to floor tiles, 12-inch diameter; observe excursion of 1 foot over about 10 feet of the course).	Marked deviation Mild/moderate deviation or uses walking aid Straight without walking aid	= 0 = 1 = 2	
15. Trunk	Marked sway or uses walking aid No sway but flexion of knees or back, or spreads arms out while walking No sway, no flexion, no use of arms, and no use of walking aid	= 0 = 1 = 2	
16. Walking Stance	Heels apart Heels almost touching while walking	= 0 = 1	
	Gait Score:		
	Balance + Gait Score:		

Tinetti scale - scores

- The maximum score for **the gait component is 12 points,**
- The maximum score for **the balance component is 16 points,**
- **The maximum total score is 28 points,**
- In general, patients who score **below 19 are at a high risk for falls,**
- Patients who score in the range of **19-24 indicate that the patient has a risk for falls.**

History and physical examination

- **WE NEED**
  - **complete assessment of risk factors,**
  - the focus is **on identifying intrinsic, extrinsic, and situational factors**
    - that can be reduced by interventions targeted at them.
- **Patients are asked open-ended questions about**
  - the most recent fall or falls
  - more specific questions about **when and where a fall occurred and what they were doing.**
- Witnesses are asked the same questions.

History and physical examination

- Patients should be asked **whether they had premonitory or associated symptoms** (eg, palpitations, shortness of breath, chest pain, vertigo, light-headedness) and **whether consciousness was lost.**
- The history should include **questions about**
  - **past and present medical problems,**
  - use of prescription and over-the-counter drugs
  - and use of alcohol.

The physical examination

- **Temperature** should be measured - to determine whether fever was a factor.
- **Heart rate and rhythm** should be assessed - to identify obvious bradycardia, resting tachycardia, or irregular rhythms.
- **Blood pressure** should be measured with patient's supine and after patients stand for 1 and 3 minutes - to rule out orthostatic hypotension.
- **Auscultation** can detect many types of valvular heart disorders.
- **Visual acuity should be evaluated** with patients wearing their usual corrective lenses if needed.
  - Abnormalities in visual acuity should trigger a more detailed visual examination by an optometrist or ophthalmologist.
- **The neck, spine, and extremities (especially the legs and feet)** should be evaluated for weakness, deformities, pain, and limitation in range of motion.

History and physical examination

- A neurologic examination should be done;
  - it includes testing **muscle strength and tone**, **sensation** (including proprioception), **coordination** (including cerebellar function), **stationary balance and gait.**

Laboratory tests

There is no standard diagnostic evaluation.

- Testing should be based on the history and examination and helps rule out various causes:
  - A complete blood count (CBC) for anemia or leukocytosis
  - Blood glucose measurement for hypoglycemia or hyperglycemia
  - Electrolyte measurement for dehydration

The other tests

- Tests such as electrocardiography (ECG), ambulatory cardiac monitoring, and echocardiography are recommended only when a cardiac cause is suspected.

- Spinal x-rays and cranial computer tomography (CT) or magnetic resonance imaging (MRI) are indicated only when the history and physical examination detect new neurologic abnormalities.

KEY POINTS

- Each year, 30 to 40% of older people living in the community and 50% of nursing home residents fall.
- Falls contribute to > 40% of nursing home admissions and are the 7th leading cause of death in people ≥ 65.
- Causes are multifactorial and include age- and illness-related decline in function, environmental hazards, and adverse drug effects.
- Assess the patient for predisposing factors and assess the home for hazards.
- To the extent possible, treat causative disorders, change or stop causative drugs, and correct environmental hazards.
- Patients who have fallen more than once or who have problems during balance and gait testing may benefit from physical therapy or an exercise program.
- Teach techniques for getting off the floor and consider use of a wearable emergency response device.

- A case study of a critical incident based on a hospital fall of an elderly patient
- with memory problems who has had several falls at home and has been admitted to a community hospital for assessment

Case study

- **Patient AB – 87 years old lady** living alone in the small flat in the centre of Warsaw. Her son lives in the USA,
  - who has had repeated falls at home,
  - who is in frail health (e.g immobility, dehydration, malnutrition),
  - and is showing symptoms of dementia,
  - Urinal incontinience,
  - was admitted to a general hospital because her diabetes was extremely unstable,
  - During her stay in hospital, patient AB became disoriented and fell going to the bathroom,
  - She sustained a neck of femur fracture
    - required surgery and consequently a long hospital stay.
  - On discharge she was referred to the rehabilitation unit for assessment.

With regard to patient AB: (the example of the cascade)

She was exibiting the memory loss,

- And behaviours symptomatic of dementia

She had not engaged with medical servises for some time

- Her physical health had degenerated leaving her frail and unable to cope with activities of daily living

As a consequence her diabetes had become dangerously unstable resulting in her collapsing at home

- And then being admitted to the hospital where the fall that fracture the hip took place

Loss of independent functioning

She needs 24h care in nursing home

Comprehensive geriatric assessment

Comprehensive geriatric assessment

- **The multidimensional interdisciplinary diagnostic process** focused on determining a frail older person's
  - medical,
  - psychological
  - and functional capability
- in order to
  - develop a co-ordinated and integrated plan for treatment and long-term care,

Comprehensive geriatric assessment

Components	Elements
Medical assessment	•Co-morbid conditions and disease severity •Medication review •Nutritional status
Assessment of functioning	•Basic activities of daily living •Instrumental activities of daily living •Activity / exercise status •Gait and balance
Psychological assessment	•Mental status (cognitive) testing •Mood / depression testing
Social assessment	•Informal support needs and assets •Care resource eligibility / financial assessment
Environmental assessment	•Home safety •Transportation

Essentials of Assessment

Comprehensive Geriatric Assessment

- **Functional Status:** assess the level of need of assistance/independence
  - ADL, IADL, Falls
- **Physical HealthGeneral:** Weight changes, adequacy of sleep, vision, hearing deficits, shortness of breath, chest pain, constipation, fecal incontinence, Urinary incontinence, prostate enlargement, joint pains, weakness, sensation changes, muscle wasting, fractures, tremors, imbalance, dizziness
- **Cognitive/psychiatric function**: signs and symptoms of Cognitive impairment/ dementia, Delirium, Mood disorders
- **Medical history:** Comorbidities, Medication (presence of polypharmacy)
- **Socioeconomic / environmental issues:** Care-giver availability, Environmental assessment: home accessibility, home safety (e.g., bathroom equipment, clutter), transportation, Savings, income,

Physical examination

- Routine general systems exam and focused exam of the following:

1. **Neurologic:** The Mini Mental State Examination (MMSE) evaluates cognitive function,
   1. with scores of 26 or less being abnormal.
2. **The clock drawing test** assesses executive control and visual spatial skills, which are incompletely tested by the MMSE.
   - The individual is given a blank sheet of paper and asked first to draw the face of a clock, place the numbers on the clock, and then draw the hands to indicate a given time. To successfully complete this task, the patient must first draw the contour of the clock, then place the numbers 1 through 12 inside, and finally indicate the correct time by drawing in the hands of the clock.

Psychiatric: The best question to ask is,

- "Do you often feel sad or depressed?"
- If the answer is affirmative, perform the Geriatric Depression Scale, a 15-item scale
  - with scores of 6 or more indicating depression.

Nutrition: Signs of malnutrition, Mini Nutrisional Assesment

Functional assessment

- **Timed Up-and-Go (TUG) test:**

The patient gets up from an armchair, walks 10 ft (3 m) in a line, turns around, walks back to the chair, and sits down.

The time required to complete this is normally 10 seconds or less. Impaired balance and mobility is likely if it takes the patient longer than 20 seconds, predicting future disability.

- **The Katz daily living scale**, which scores bathing, dressing, toileting, transferring, continence and feeding. Range, 0 to 6 points. 0: lowest functional level/very dependent,
- **The Lawton IADL scale:** Identifies independent living skills: ability to use a telephone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility for own medications and ability to handle finances. Scores: 0 to 8. Score 0: needs assistance. score 8: independent.t. 6: Independent.

Activities of daily living (ADLs)

- **Activities of daily living** (ADLs) is a scale we use in medicine and nursing.

- **ADLs** are
  - *"**the things we normally do** in daily living, including any daily activity we perform for*
    - ***self-care** (such as feeding ourselves, bathing, dressing, grooming),*
    - ***work,***
    - ***homemaking**,*
    - *and **leisure**",*

Basic ADLs

- **The basic activities of daily living consist of these self-care tasks:**
  - Personal hygiene
  - Dressing and undressing
  - Eating
  - Transferring from bed to chair, and back
  - Voluntarily controlling urinary and fecal discharge
  - Elimination
  - Moving around (as opposed to being bedridden)

KATZ BASIC ACTIVITIES OF DAILY LIVING (ADL) SCALE		
	Independent	
	YES	NO
1. Bathing (sponge bath, tub bath, or shower) Receives either no assistance or assistance in bathing only one part of body		
2. Dressing - Gets clothes and dresses without any assistance except for tying shoes.		
3. Toileting - Goes to toilet room, uses toilet, arranges clothes, and returns without any assistance (may use cane or walker for support and may use bedpan/urinal at night.		
4. Transferring - Moves in and out of bed and chair without assistance (may use can or walker).		
5. Continence - Controls bowel and bladder completely by self (without occasional "accidents").		
6. Feeding - Feeds self without assistance (except for help with cutting meat or buttering bread).		

The Barthel scale or Barthel ADL Index

- The **Barthel scale** or **Barthel ADL index** is a scale used to measure performance in basic Activities of Daily Living.
- It uses ten variables describing activities of daily living (ADL) and mobility.

The Barthel Index

- **10 variables addressed in the Barthel scale are:**
  - presence or absence of fecal incontinence
  - presence or absence of urinary incontinence
  - help needed with grooming
  - help needed with toilet use
  - help needed with feeding
  - help needed with transfers (e.g. from chair to bed)
  - help needed with walking
  - help needed with dressing
  - help needed with climbing stairs
  - and help needed with bathing

THE BARTHEL INDEX

Patient Name: _____

Rater Name: _____

Date: _____

Activity	Score
FEEDING 0 = unable 5 = needs help cutting, spreading butter, etc., or requires modified diet 10 = independent	_____
BATHING 0 = dependent 5 = independent (or in shower)	_____
GROOMING 0 = needs to help with personal care 5 = independent face/hair/teeth/shaving (implements provided)	_____
DRESSING 0 = dependent 5 = needs help but can do about half unaided 10 = independent (including buttons, zips, laces, etc.)	_____
BOWELS 0 = incontinent (or needs to be given enemas) 5 = occasional accident 10 = continent	_____

BLADDER

0 = incontinent, or catheterized and unable to manage alone
5 = occasional accident
10 = continent _____

TOILET USE

0 = dependent
5 = needs some help, but can do something alone
10 = independent (on and off, dressing, wiping) _____

TRANSFERS (BED TO CHAIR AND BACK)

0 = unable, no sitting balance
5 = major help (one or two people, physical), can sit
10 = minor help (verbal or physical)
15 = independent _____

MOBILITY (ON LEVEL SURFACES)

0 = immobile or < 50 yards
5 = wheelchair independent, including corners, > 50 yards
10 = walks with help of one person (verbal or physical) > 50 yards
15 = independent (but may use any aid; for example, stick) > 50 yards _____

STAIRS

0 = unable
5 = needs help (verbal, physical, carrying aid)
10 = independent _____

TOTAL (0–100): _____

Instrumental ADL

- **Instrumental activities of daily living (IADL)** are not necessary for fundamental functioning, but they let an individual live independently in a community:
  - Doing light housework
  - Preparing meals
  - Taking medications
  - Shopping for groceries or clothes
  - Using the telephone
  - Managing money
  - Using technology

THE LAWTON INSTRUMENTAL ACTIVITIES OF DAILY LIVING SCALE

Ability to Use Telephone

1. Operates telephone on own initiative; looks up and dials numbers 1
2. Dials a few well-known numbers 1
3. Answers telephone, but does not dial 1
4. Does not use telephone at al 0

Shopping

1. Takes care of all shopping needs independently 1
2. Shops independently for small purchases 0
3. Needs to be accompanied on any shopping trip 0
4. Completely unable to shop 0

Food Preparation

1. Plans, prepares, and serves adequate meals independently 1
2. Prepares adequate meals if supplied with ingredients 0
3. Heats and serves prepared meals or prepares meals but does not maintain adequate diet 0
4. Needs to have meals prepared and served 0

Housekeeping

1. Maintains house alone with occasion assistance (heavy work) 1
2. Performs light daily tasks such as dishwashing, bed making 1
3. Performs light daily tasks, but cannot maintain acceptable level of cleanliness 1
4. Needs help with all home maintenance tasks 1
5. Does not participate in any housekeeping tasks 0

Laundry

1. Does personal laundry completely 1
2. Launders small items, rinses socks, stockings, etc 1
3. All laundry must be done by others 0

Mode of Transportation

1. Travels independently on public transportation or drives own car 1
2. Arranges own travel via taxi, but does not otherwise use public transportation 1
3. Travels on public transportation when assisted or accompanied by another 1
4. Travel limited to taxi or automobile with assistance of another 0
5. Does not travel at all 0

Responsibility for Own Medications

1. Is responsible for taking medication in correct dosages at correct time 1
2. Takes responsibility if medication is prepared in advance in separate dosages 0
3. Is not capable of dispensing own medication 0

Ability to Handle Finances

1. Manages financial matters independently (budgets, writes checks, pays rent and bills, goes to bank); collects and keeps track of income 1
2. Manages day-to-day purchases, but needs help with banking, major purchases, etc 1
3. Incapable of handling money 0

Scoring: For each category, circle the item description that most closely resembles the client's highest functional level (either 0 or 1).

Lawton, M.P., & Brody, E.M. (1969). Assessment of older people: Self-maintaining and instrumental activities of daily living. *The Gerontologist, 9*(3), 179-186.

Mini Nutritional Assessment

Screening

A **Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?**
0 = severe decrease in food intake
1 = moderate decrease in food intake
2 = no decrease in food intake ☐

B **Weight loss during the last 3 months**
0 = weight loss greater than 3kg (6.6lbs)
1 = does not know
2 = weight loss between 1 and 3kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C **Mobility**
0 = bed or chair bound
1 = able to get out of bed / chair but does not go out
2 = goes out ☐

D **Has suffered psychological stress or acute disease in the past 3 months?**
0 = yes 2 = no ☐

E **Neuropsychological problems**
0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems ☐

F **Body Mass Index (BMI) (weight in kg) / (height in m^2)**
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater ☐

Screening score ☐☐
(subtotal max. 14 points)

12 points or greater: Normal – not at risk – no need to complete assessment

11 points or below: Possible malnutrition – continue assessment

Assessment

G	**Lives independently (not in nursing home or hospital)** 1 = yes 0 = no	☐
H	**Takes more than 3 prescription drugs per day** 0 = yes 1 = no	☐
I	**Pressure sores or skin ulcers** 0 = yes 1 = no	☐
J	**How many full meals does the patient eat daily?** 0 = 1 meal 1 = 2 meals 2 = 3 meals	☐
K	**Selected consumption markers for protein intake** • At least one serving of dairy products (milk, cheese, yoghurt) per day yes ☐ no ☐ • Two or more servings of legumes or eggs per week yes ☐ no ☐ • Meat, fish or poultry every day yes ☐ no ☐ 0.0 = if 0 or 1 yes 0.5 = if 2 yes 1.0 = if 3 yes	☐.☐
L	**Consumes two or more servings of fruit or vegetables per day?** 0 = no 1 = yes	☐
M	**How much fluid (water, juice, coffee, tea, milk...) is consumed per day?** 0.0 = less than 3 cups 0.5 = 3 to 5 cups 1.0 = more than 5 cups	☐.☐
N	**Mode of feeding** 0 = unable to eat without assistance 1 = self-fed with some difficulty 2 = self-fed without any problem	☐
O	**Self view of nutritional status** 0 = views self as being malnourished 1 = is uncertain of nutritional state 2 = views self as having no nutritional problem	☐

P In comparison with other people of the same age, how does the patient consider his / her health status?

0.0 = not as good
0.5 = does not know
1.0 = as good
2.0 = better ☐.☐

Q Mid-arm circumference (MAC) in cm

0.0 = MAC less than 21
0.5 = MAC 21 to 22
1.0 = MAC 22 or greater ☐.☐

R Calf circumference (CC) in cm

0 = CC less than 31
1 = CC 31 or greater ☐

Assessment (max. 16 points) ☐☐.☐

Screening score ☐☐.☐

Total Assessment (max. 30 points) ☐☐.☐

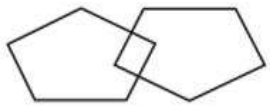
Malnutrition Indicator Score

17 to 23.5 points	☐	at risk of malnutrition
Less than 17 points	☐	malnourished

Mini-Mental State Examination (MMSE)

Patient's Name: _____ Date: _____

Instructions: Ask the questions in the order listed.
Score one point for each correct response within each question or activity.

Maximum Score	Patient's Score	Questions
5		"What is the year? Season? Date? Day of the week? Month?"
5		"Where are we now: State? County? Town/city? Hospital? Floor?"
3		The examiner names three unrelated objects clearly and slowly, then asks the patient to name all three of them. The patient's response is used for scoring. The examiner repeats them until patient learns all of them, if possible. Number of trials: _____
5		"I would like you to count backward from 100 by sevens." (93, 86, 79,72, 65, …) Stop after five answers. Alternative: "Spell WORLD backwards." (D-L-R-O-W)
3		"Earlier I told you the names of three things. Can you tell me what those were?"
2		Show the patient two simple objects, such as a wristwatch and a pencil, and ask the patient to name them.
1		"Repeat the phrase: 'No ifs, ands, or buts.'"
3		"Take the paper in your right hand, fold it in half, and put it on the floor." (The examiner gives the patient a piece of blank paper.)
1		"Please read this and do what it says." (Written instruction is "Close your eyes.")
1		"Make up and write a sentence about anything." (This sentence must contain a noun and a verb.)
1		"Please copy this picture." (The examiner gives the patient a blank piece of paper and asks him/her to draw the symbol below. All 10 angles must be present and two must intersect.) 
30		**TOTAL**

Standardized Mini-Mental State Examination (SMMSE) Scoring

Table 1: Stages of Cognitive Impairment as Defined by SMMSE Scores

SCORE	DESCRIPTION	STAGE	DURATION (years)
30-26	could be normal	could be normal	varies
25-20	mild	early	0-23
19-10	moderate	middle	4-7
9-0	severe	late	7-14

Table 2: Areas of Functional Impairment

SCORE	ACTIVITIES OF DAILY LIVING	COMMUNICATION	MEMORY
30-26	could be normal	could be normal	could be normal
25-20	driving, finances, shopping	finding words, repeating, going off topic	three-item recall, orientation to time then place
19-10	dressing, grooming, toileting	sentence fragments, vague terms (e.g., this, that)	spelling WORLD backward, language, and three-step command
9-0	eating, walking	speech disturbances such as stuttering and slurring	obvious deficits in all areas

Geriatric Depression Scale (GDS) Scoring Instructions

Instructions: Score 1 point for each bolded answer. A score of 5 or more suggests depression.

1.	Are you basically satisfied with your life?	yes	**no**
2.	Have you dropped many of your activities and interests?	**yes**	no
3.	Do you feel that your life is empty?	**yes**	no
4.	Do you often get bored?	**yes**	no
5.	Are you in good spirits most of the time?	yes	**no**
6.	Are you afraid that something bad is going to happen to you?	**yes**	no
7.	Do you feel happy most of the time?	yes	**no**
8.	Do you often feel helpless?	**yes**	no
9.	Do you prefer to stay at home, rather than going out and doing things?	**yes**	no
10.	Do you feel that you have more problems with memory than most?	**yes**	no
11.	Do you think it is wonderful to be alive now?	yes	**no**
12.	Do you feel worthless the way you are now?	**yes**	no
13.	Do you feel full of energy?	yes	**no**
14.	Do you feel that your situation is hopeless?	**yes**	no
15.	Do you think that most people are better off than you are?	**yes**	no

A score of $\geq$ 5 suggests depression ***Total Score*** _____

Ref. Yes average: The use of Rating Depression Series in the Elderly, in Poon (ed.): Clinical Memory Assessment of Older Adults, American Psychological Association, 1986

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